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Remarks

Claims 1-22 are pending in the application.

Claims 5-9 and 14-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. For reasons set forth below, Applicant submits that independent claims 1 and 10 from which claims 5-9 and 14-18 depend, are patentable under 35 U.S.C. 102. Therefore, these claims 5-9 and 14-18 are also patentable in their present dependent form.

Claims 1-4, 10-13 and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (US Patent No.: 5,903,370).

Each of the various rejections and objections are overcome by amendments that are made to the specification, drawing, and/or claims, as well as, or in the alternative, by various arguments that are presented.

Any amendments to any claim for reasons other than as expressly recited herein as being for the purpose of distinguishing such claim from known prior art are not being made with an intent to change in any way the literal scope of such claims or the range of equivalents for such claims. They are being made simply to present language that is better in conformance with the form requirements of Title 35 of the United States Code or is simply clearer and easier to understand than the originally presented language. Any amendments to any claim expressly made in order to distinguish such claim from known prior art are being made only with an intent to change the literal scope of such claim in the most minimal way, i.e., to just avoid the prior art in a way that leaves the claim novel and not obvious in view of the cited prior art, and no equivalent of any subject matter remaining in the claim is intended to be surrendered.

Also, since a dependent claim inherently includes the recitations of the claim or chain of claims from which it depends, it is submitted that the scope and content of any dependent claims that have been herein rewritten in independent form is exactly the same as the scope and content of those claims prior to having been rewritten in independent form. That is, although by convention such rewritten claims are labeled herein as having been "amended," it is submitted that only the format, and not the content, of these claims

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has been changed. This is true whether a dependent claim has been rewritten to expressly include the limitations of those claims on which it formerly depended or whether an independent claim has been rewriting to include the limitations of claims that previously depended from it. Thus, by such rewriting no equivalent of any subject matter of the original dependent claim is intended to be surrendered. If the Examiner is of a different view, he is respectfully requested to so indicate.

Objections

Claims 5-9 and 14-18 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. For reasons set forth below, Applicant submits that independent claims 1 and 10 from which claims 5-9 and 14-18 depend, are patentable under 35 U.S.C. 102. Therefore, claims 5-9 and 14-18 are also patentable in their present dependent form.

Rejection Under 35 U.S.C. 102

Claims 1-4, 10-13, and 19-22

Claims 1-4, 10-13, and 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson. Applicant respectfully traverses the rejection.

Johnson does not teach each and every element recited in independent claims 1, 10 or 19. As set forth below, Johnson does not teach at least: "means for monitoring the connections from the optical network units to detect a loss of signal from an optical network unit, and a plurality of switching elements, one for each optical network unit, responsive to the detection of loss of signal from the respective optical network unit to switch the respective optical network unit out of the series such that continuity of the ring topology is maintained," as provided in Applicant's claim 1.

Johnson relates to a transmission-based restoration system to restore traffic within an optical domain in case of failure of an optical pipe (e.g., Abstract, Summary of Invention, col.3, lines 28-55), which is different from Applicant's invention for protection within an optical access network, e.g., one that provides optical connections between a

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public network and end-users. As explained in Johnson's col. 1, lines 44-67, different restoration processes are used for restoring traffic within different layers in a network.

Applicant's independent claims 1, 10 and 19 relate to a protection switch in an optical access network that includes optical network units (ONUs) interconnected in a series, with an optical line terminal connected to the first and last ONUs, thus forming a ring topology. Connections between the ONUs and the line terminal are provided via the protection switch. There is simply no teaching or suggestion in Johnson's Figs. 5B and 6 regarding a protection switch for such an optical access network with ONUs.

Instead, Figs. 5B and 6 show a switch (e.g., 52, 53) at each node in an optical communication network, with each node being connected to each other via respective line terminating equipments LTE 45 in a ring topology. Figs. 5B or 6 do not show any switch providing connections between a line terminal and an ONU, or between two ONUs, as arranged in Applicant's claims 1, 10 or 19.

In case of a fiber cut 59 between two nodes (Fig. 5B), switches 52 and 53 re-route traffic from a working ring 47 to a spare ring 48, and traffic originally heading towards the fiber cut 59 are directed by the switches in the opposite directions, i.e., away from fiber cut 59. However, neither switch 52 nor 53 switches any ONU out of the series.

Even if one were to assume that Johnson's node is analogous to an ONU, all the nodes are still kept in the series of connections during restoration mode. Furthermore, if either node around the fiber cut, e.g., nodes B or C, were to be switched out of the series, it would result in a discontinuity in Johnson's ring network.

Thus, Johnson does not teach or suggest at least the features of: "a plurality of switching elements, one for each optical network unit, responsive to the detection of loss of signal from the respective optical network unit to switch the respective optical network unit out of the series such that continuity of the ring topology is maintained," as in Applicant's claim 1. Similar relevant features are also provided in claims 10 and 19.

Therefore, Applicant submits that independent claims 1, 10 and 19 are not anticipated by Johnson and, thus, are patentable under 35 U.S.C. 102.

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Since all of the dependent claims that depend from the independent claims include all the limitations of the respective independent claim from which they ultimately depend, each such dependent claim is also allowable over Johnson under 35 U.S.C. 102.

As such, the Examiner's rejection should be withdrawn.

Allowable Subject Matter

Applicant thanks Examiner for indicating that claims 5-9 and 14-18 are allowable if rewritten in independent form. However, for reasons set forth above, Applicant submits that these claims, which depend from claims 1 and 10 respectively, are also allowable in their current dependent form under 35 U.S.C. 102.

Conclusion

It is respectfully submitted that the Office Action's rejections have been overcome and that this application is now in condition for allowance. Reconsideration and allowance are, therefore, respectfully solicited.

If, however, the Examiner still believes that there are unresolved issues, the Examiner is invited to call Eamon Wall at (732) 530-9404 so that arrangements may be made to discuss and resolve any such issues.

Respectfully submitted,

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